Stanford

Jocelyn Richardson

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Bio

BIO

I am an Associate Scientist at SLAC National Accelerator Laboratory, where I explore the intersection of biology and the environment. My research delves into the biogeochemical processes that govern the cycling of essential elements like phosphorus (P), sulfur (S), and potassium (K). With expertise in X-ray Fluorescence (XRF) imaging and tender energy X-ray Absorption Spectroscopy (XAS), I apply these advanced techniques to a diverse range of systems. At SSRL, I contribute to enhancing outreach and engagement with the biological and environmental research communities, offering training and fostering collaboration with both new and experienced users of advanced X-ray methods.

Before joining SSRL, I earned my PhD from Washington University in St. Louis, where my research focused on the geochemical signatures of sulfur in Ordovician marine sediments, employing a combination of sedimentology, bulk geochemistry, and microanalytical techniques. I am originally from Scotland and obtained my BSc in Geology from the University of St. Andrews in Scotland.

LINKS

- My Lab Website: https://jocelynannrichardson.owlstown.net/

Publications

PUBLICATIONS

- **Phosphorus availability influences potassium chemistries in the ectomycorrhizal fungi Pisolithus tinctorius and Paxillus ammoniavirescens.** *Fungal biology*
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- **X-ray fluorescence and XANES spectroscopy revealed diverse potassium chemistries and colocalization with phosphorus in the ectomycorrhizal fungus Paxillus ammoniavirescens** *FUNGAL BIOLOGY*
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- **Sulfur isotopes from the Paleoproterozoic Francevillian Basin record multigenerational pyrite formation, not depositional conditions** *COMMUNICATIONS EARTH & ENVIRONMENT*
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